

UNITED STATES PATENT OFFICE

2,145,151

METHOD OF MANUFACTURING CIGARETTE PAPER

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No Drawing. Application February 3, 1936, Serial No. 62,225. In France February 11, 1935

2 Claims. (Cl. 92—21)

In the French Patent No. 732,872, of March 9, 1932, there is described a process in which stearic acid is incorporated into cigarette paper, by producing, in the paper pulp, a decomposition which disengages the desired acid. Preferably, there is added a soluble stearate the acid of which has been precipitated by addition of oxalic acid until a weak acidity is obtained (pH averaging 6). In this patent, it was advised to operate in such manner as to leave in the cigarette paper an amount of stearic acid averaging from 2 to 8% of the total weight of the paper.

It may be of interest to reduce the amount of stearic acid in the final product. However, this reduction may tend to impair the whiteness and the opacity of the paper, these being qualities which are requested on many markets. It is therefore necessary to compensate for this modification by a corresponding addition of loading materials or fillers. These loading materials or fillers must comply with several conditions. For instance, they must be compatible with oxalic acid or any other acid that is used for the precipitation of stearic acid, that is to say these loading materials must not react on the acid above mentioned. Furthermore, they must not interfere with the combustion of the paper, for instance they must not have a reducing action, in order to avoid incomplete combustions of the cellulosic fibers or of the additional products, such as stearin, since the products resulting from incomplete combustion, for instance acroleine and similar bodies are evil smelling.

It is therefore necessary to avoid the introduction of calcium or magnesium oxalates in addition to the amounts produced by the alkali-earth salts of waters because oxalates are reducing bodies. On the other hand, the utilization of products facilitating a very quick combustion, such as chlorates or nitrates is not advisable because these bodies also give evil smelling combustion products.

The object of the present invention is to provide a process owing to which, on the one hand, I reduce the amount of stearic acid introduced in any suitable manner but preferably through a decomposition in the mass of the paper pulp, and, on the other hand, I add loading materials which do not decompose under the effect of the temperature, or which, whereas being decomposed, do not yield reducing products. In the latter case, the inflow of air to the ignition zone is such that the products of combustion are extremely similar to the products of a theoretically complete combustion, to wit carbon dioxide and odourless products.

Among the loading materials which comply with these conditions and which will be chosen

according to the circumstances, I may cite kaolins of more or less finely divided texture, white metallic oxides, finely divided silicas, asbestos, etc.

An especially advantageous embodiment of the invention consists in making use, as loading material, of titanium dioxide. The product has an excellent covering power and it compensates for the loss of opacity which results from the reduction of the percentage of stearic acid. Due to this reduction of the amount of acid present in the paper, the latter, while keeping its good properties of elongation, has its breaking strength increased. The weight of paper per square meter is not substantially increased. Practically, the cigarette does not take a yellow colour when in use. Furthermore the simultaneous presence of stearic acid and titanium oxide gives a special advantage, which is the following: stearic acid increases the retaining coefficient of the relatively expensive loading material consisting of titanium oxide.

I shall indicate, merely by way of example, that the percentage of stearic acid precipitated in the paper may be reduced to about 0.8% and that a good proportion of titanium oxide in the paper is about 2%.

The loading matter, for instance titanium oxide, is preferably added to the paper pulp while the latter is in the refining device.

The present invention further includes the manufacturing process in which the steps above mentioned are combined with that consisting in wholly eliminating, or at least eliminating as completely as possible, the calcium oxalate that comes from the calcareous salts present in water. For this purpose, I may previously decalcify the waters serving to the treatment of the paper pulp, for instance as explained in the French patent above referred to, by precipitating the calcareous salts into the state of insoluble calcium oxalate or I may choose natural waters having a low hydro-timetric degree.

In a general manner, I do not wish to be limited to the specific data above disclosed as there might be changes made therein without departing from the principle of the present invention as comprehended within the scope of the appended claims.

What I claim is:

1. A process for the manufacture of cigarette paper from paper pulp, which comprises incorporating in said paper pulp stearic acid and titanium dioxide, in such amounts that the final percentages thereof in the cigarette paper are substantially equal to 0.8 and 2 respectively.

2. A cigarette paper which contains stearic acid and titanium dioxide in amounts substantially equal to 0.8 and 2 per cent, respectively.

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